

41st Argos Operations Committee Meeting

Saint-Jean-de-Luz, FRANCE

June 5th to 7th, 2007

E-2-1/E-2-2/E-2-3 – The future Argos-3 Instruments - CNES



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Argos-3 on board METOP-B and C

METOP-1 (should become METOP-B) : satellite currently in Storage (and should stay in this state until 2008).

- first satellite built by Astrium in an uncompleted version.
- the first A-DCS flight model FM1 delivered to Alenia in February 2002 has been replaced in August 2004 by the **FM5**
- new version of management software (v 1.8) to be uploaded
- METOP-1 should be launched in April 2011.

METOP-3 (should become METOP-C): satellite currently in Storage (the payload module in Astrium-D, the platform in Astrium-F).

- the satellite activities should be re-started in 2008, in parallel of METOP-1.
- the Argos-3 instrument on-board METOP-3 is the Flight Model **FM4** (delivered to Alenia in May 2003).
- processing software reloaded in May 2004 in Astrium-D.
- new version of management software (v 1.8) to be uploaded
- METOP-3 should be launched in 2015.

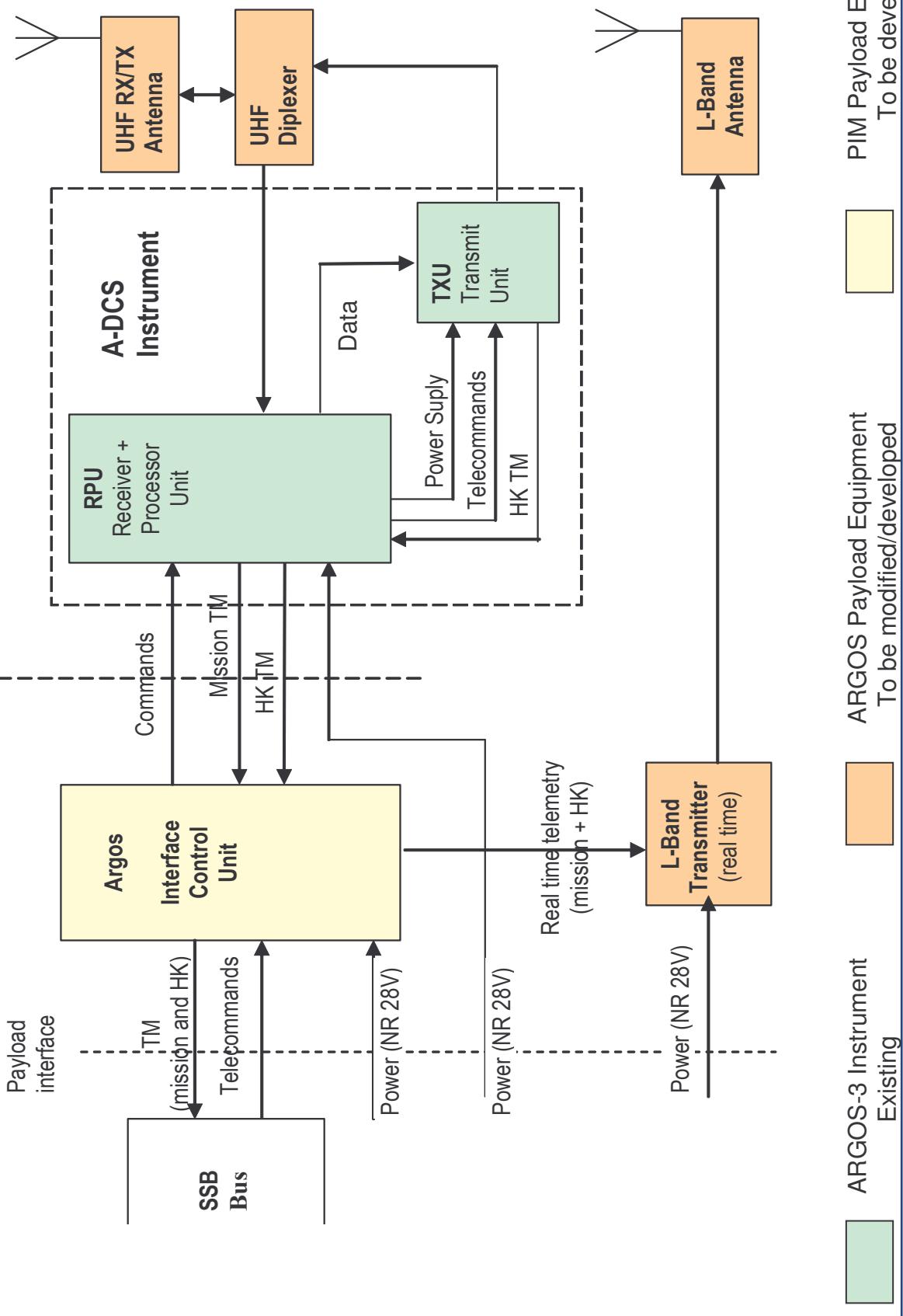
Argos-3 on board NOAA-N'

- NOAA-N' is the last satellite of the POES family.
- The NOAA-N' Argos instrument is identical to the METOP ones, excepted the DC/DC converter card that has been modified to decrease the current ripple (the modification implying a power consumption increase).
- The Argos-3 instrument on-board NOAA-N' is the Flight Model **FM3** (delivered to Alenia in December 2002, and then returned in France after the satellite accident of September 2003).
 - The instrument has not been damaged by the fall, has been upgraded (processing software) and has been delivered again in September 05 in Lockheed Martin (Sunnyvale, CA).
 - The Detailed Electrical Tests (DET) have been successfully performed in August/September 2006.
 - The new version of management software (v 1.8) should be uploaded in November 2007 in LMSCC after the thermal vacuum tests.

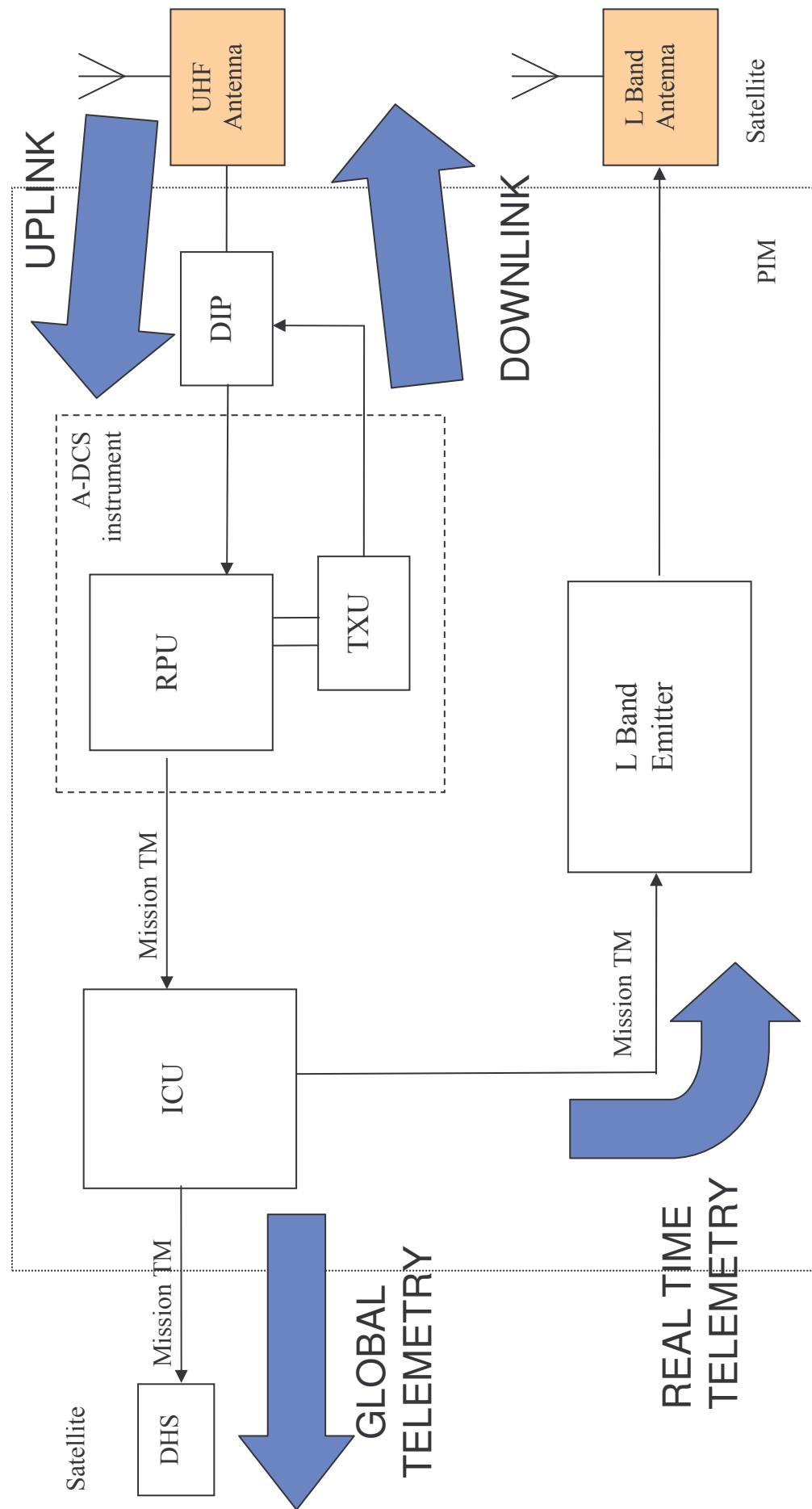
Argos-3 on board SARAL

- The Flight Model FM1 was initially mounted on-board METOP-1, but it has been dismounted in 2004 since it was not in its final state.
- The processing software (v 1.5) have been uploaded by Thalès end of 2004.
- The acceptance tests have been performed early 2005 and the Test Review Meeting has been held.
- FM1 is still in Thalès and has been used to validate the new management software (v 1.8).
- Long duration tests (> 1 month) have been performed on side 1 of the instrument and will be done on side 2 : verification of the non-genericity of the anomaly identified on Metop-A (TM corruption).

SARAL ARGOS PAYLOAD



SARAL ARGOS DATA



Mission Telemetry on board SARAL

- CCSDS packets are generated by the ICU
- Global Mode : mission data stored on board SARAL platform memory then transmitted via X-band transmitter
 - high latitude X-band ground station to be deployed
 - complementary X-band station in Hyderabad – TBC
 - all Altika mission data are transmitted via x-band
- Real-Time mode : mission data directly transmitted from ICU to L-band transmitter
 - compatibility between NOAA, METOP and SARAL real-time links
 - frequency declaration to be done by CNES (see agenda item E-4-1) as concerns SARAL
 - global mission telemetry could be also transmitted via L-band (capability to download one orbit of Argos data within 3 minutes)